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FOR THE BENEFIT OF THE LESS DEVELOPED AREAS

SUMMARY

Agenda Item: D.5.1

Food and Agricultural Organization

IMPLICATIONS FOR DEVELOPING COUNTRIES OF RECENT TECHNICAL ADVANCES IN THE PRODUCTION OF PULP AND PAPER

By Hans Wilhelm GIERTZ

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Implications for Developing Countries of Recent Technical Advances in the Production of Pulp and Paper

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Summary

1. Up to the second world war the predominant part of all paper and board in the world was produced from long fibre coniferous wood and the prevalent opinion was that paper products had to be made from long fibre pulps. The raw materials available in developing countries, however, are generally of the short fibre type, such as broadleaved woods, bagasse, straw and other agricultural residues, and this fact has been considered to be of greatest importance when planning for a new paper industry in these countries.

2. It is today an established fact that short fibre raw materials to a large extent can be used for paper and board production. For products like printing and writing papers, ordinary wrapping papers and corrugating board the main part of the furnish can consist of short fibre pulps, whereas for products with high strength requirements, as kraft papers and multi-wall sack papers, the long fibre portion must be about 50 per cent or more. With the new technique of making extensible papers it might be possible to reduce this portion.

3. In the field of pulping an important problem is to find a substitution for the kraft processes. The kraft process has the great advantage of being the single process according to which all kinds of raw materials can be pulped; at the same time, however, the kraft process requires an expensive installation for the recovery of the chemicals, making it necessary to build large units in order to achieve economical production. Great progress has in the last few years been made in developing new processes of sulphite cooking, which do not necessarily require a recovery system and therefore can be built in smaller units. The technical experience of such processes in the field of different types of broadleaved pulps and agricultural residues is still incomplete and meagre.

4. Important improvements have been made in using broadleaved wood in the production of mechanical pulp and newsprint. Today pine groundwood or a mixture of groundwood and semi-chemical pulp from certain hardwoods can substitute spruce groundwood in newsprint. The same holds for bagasse.

5. In the field of papermaking, recent developments and improvements are of limited implication for developing countries. It seems likely, however, that a recent innovation in the field of paper machine construction will be of importance, making it possible to produce on one and the same machine a great variety of products with widely different basis weight which includes the most common types of paper and board products.

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